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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/657,635	09/06/2000	Ismayil M. Gurncar	2000P82261 US	1723

7590

05/06/2002

Elsa Keller
 SIEMENS CORPORATION
 Intellectual Property Department
 186 Wood Avenue South
 Iselin, NJ 08830

RECEIVED

MAY 13 2002

INTELLECTUAL PROPERTY
DEPARTMENT

EXAMINER

JAWORSKI, FRANCIS J

ART UNIT

PAPER NUMBER

3737

DATE MAILED: 05/06/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

INTELLECTUAL PROPERTY

REC'D.

IPD 2000P82261US

DUE DATE 8-6-02

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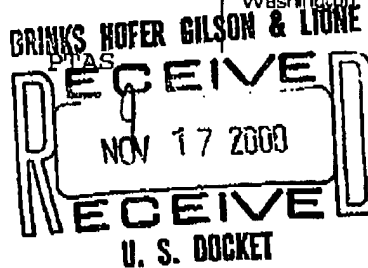
INTELLECTUAL PROPERTY DEPT.
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UNITED STATES DEPARTMENT OF COMMERCE
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NOVEMBER 08, 2000

BRINKS HOFER GILSON & LIONE
CRAIG A. SUMMERFIELD
P.O. BOX 10395
CHICAGO, IL 60610



UNITED STATES PATENT AND TRADEMARK OFFICE
NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT

THE ENCLOSED DOCUMENT HAS BEEN RECORDED BY THE ASSIGNMENT DIVISION OF THE U.S. PATENT AND TRADEMARK OFFICE. A COMPLETE MICROFILM COPY IS AVAILABLE AT THE ASSIGNMENT SEARCH ROOM ON THE REEL AND FRAME NUMBER REFERENCED BELOW.

PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY CONTACT THE EMPLOYEE WHOSE NAME APPEARS ON THIS NOTICE AT 703-308-9723. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, ASSIGNMENT DIVISION, BOX ASSIGNMENTS, CG-4, 1213 JEFFERSON DAVIS HWY, SUITE 320, WASHINGTON, D.C. 20231.

RECORDATION DATE: 09/06/2000

REEL/FRAME: 011085/0981
NUMBER OF PAGES: 4

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:
GURACAR, ISMAYIL M.

DOC DATE: 09/05/2000

ASSIGNOR:
PHILLIPS, PATRICK J.

DOC DATE: 09/05/2000

ASSIGNEE:
ACUSON CORPORATION
1220 CHARLESTON ROAD
MAIL STOP E-1
MOUNTAIN VIEW, CALIFORNIA 94043

SERIAL NUMBER: 09657635
PATENT NUMBER:

FILING DATE: 09/06/2000
ISSUE DATE:

011085/0981 PAGE 2

STEVEN POST, EXAMINER
ASSIGNMENT DIVISION
OFFICE OF PUBLIC RECORDS

09-25-2000

PATENTS ONLY

TO THE DIRECTOR OF THE



PATENTS ONLY
IND TRADEMARK OFFICE

Please record

101467649

py thereof.

1. Name of Party(ies) conveying an interest:

Ismayil M. Guracar
Patrick J. Phillips

9-6-00

2. Name and Address of Party(ies) receiving an interest:

Name: Acuson Corporation
Internal Address: Mail Stop E-1
Street Address: 1220 Charleston Road
City: Mountain View
State/Zip: CA/94043

Additional name(s) of conveying party(ies) attached?

☐ Yes ☒ No

Additional name(s) and addresses attached?

☐ Yes ☒ No

3. Description of the interest conveyed:

☒ Assignment

☐ Change of Name Other:

☐ Security Agreement

☐ Merger

Execution Date: 09/05/00

4. Application number(s) or patent number(s). Additional sheet attached? ☐ Yes ☒ No

If this document is being filed together with a new application, the execution date of the application is:

September 5, 2000

Date

A. Patent Application No.(s)

B. Patent No.(s)

Additional numbers attached? ☐ Yes ☒ No

09/657635

5. Name and address of party to whom correspondence concerning document should be mailed:

BRINKS HOFER GILSON & LIONE
P.O. BOX 10395
CHICAGO, IL 60610
(312)321-4200

6. Number of applications and patents involved: 1

7. Total fee (37 CFR 3.41) \$ 40.00

☒ Enclosed

☐ Authorized to be charged to Deposit Account No. 23-1925

8. ☒ Please charge any deficiencies in fee or credit any overpayment to Deposit Account No. 23-1925.

DO NOT USE THIS SPACE

09/25/2000 JTALLAHZ 00000214 09657635

01 FC:581

40.00 DP

9. Statement and signature.

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

Craig A. Summerfield
Name of Person Signing

Signature

September 6, 2000
Date

Total number of pages including cover sheet, attachments, and document: 4

Rev. Dec.-99

F:\COMMON\CAS\5050 ACUSON\Letters and formal papers\5050-773 Recordal of Assignment.doc

Case No. 5050-773**ASSIGNMENT**

WHEREAS, Ismayil M. Guracar and Patrick J. Phillips, hereinafter called the "Assignors", have made the invention described in the United States patent application entitled CONTRAST IMAGING BEAM SEQUENCES FOR MEDICAL DIAGNOSTIC ULTRASOUND, executed by Assignors on the same date as this Assignment;

WHEREAS, Acuson Corporation, a corporation organized and existing under the laws of the State of Delaware, having a place of business at 1220 Charleston Road, Mountain View, CA 94043, hereinafter called the "Assignee", desires to acquire the entire right, title and interest in and to the invention and the patent application identified above, and all patents which may be obtained for said invention, as set forth below;

NOW, THEREFORE, in consideration of the sum of One Dollar (\$1.00), and other valuable and legally sufficient consideration, the receipt of which by the Assignors from the Assignee is hereby acknowledged, the Assignors have sold, assigned and transferred, and by these presents do sell, assign and transfer to the Assignee, the entire right, title and interest for the United States in and to the invention and the patent application identified above, and any patents that may issue for said invention in the United States; together with the entire right, title and interest in and to said invention and all patent applications and patents therefor in all countries foreign to the United States, including the full right to claim for any such application all benefits and priority rights under any applicable convention; together with the entire right, title and interest in and to all continuations, divisions, renewals and extensions of any of the patent applications and patents defined above; to have and to hold for the sole and exclusive use and benefit of the Assignee, its successors and assigns, to the full end of the term or terms for all such patents.

The Assignors hereby covenant and agree, for both the Assignors and the Assignors' legal representatives, that the Assignors will assist the Assignee in the prosecution of the patent application identified above; in the making and prosecution of any other patent applications that the Assignee may elect to make covering the invention identified above; in vesting in the Assignee like exclusive title in and to all such other patent applications and patents; and in the prosecution of any interference which may arise involving said invention, or

any such patent application or patent; and that the Assignors will execute and deliver to the Assignee any and all additional papers which may be requested by the Assignee to carry out the terms of this Assignment.

The Commissioner of Patents and Trademarks is hereby authorized and requested to issue patents to the Assignee in accordance with the terms of this Assignment.

IN TESTIMONY WHEREOF, the Assignors have executed this agreement.

DATED:

Sept 5, 2000

Ismayil M. Guracar
Ismayil M. Guracar

DATED:

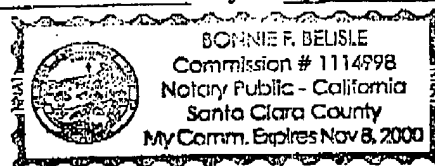
Sept 5, 2000

Patrick J. Phillips
Patrick J. Phillips

STATE OF CALIFORNIA)
) ss.
COUNTY OF SANTA CLARA)

I, BONNIE F. BELISLE, A Notary Public in and for the County and State aforesaid, do hereby certify that Ismayil M. Guracar, personally known to me to be the same person whose name is subscribed to the foregoing instrument, appeared before me this day in person and acknowledged that (s)he signed, sealed and delivered the said instrument as his/her free and voluntary act for the uses and purposes therein set forth.

IN WITNESS WHEREOF, I have hereunto set my hand and Notarial Seal, this
5TH day of SEPTEMBER, 2000.



(SEAL)

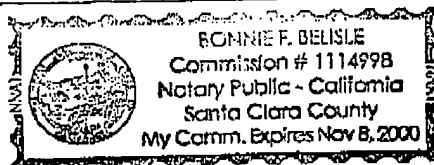
Bonnie F. Belisle
Notary Public

My Commission Expires: Nov. 8, 2000

STATE OF CALIFORNIA)
) ss.
COUNTY OF SANTA CLARA)

I, BONNIE F. BELISLE, A Notary Public in and for the County and State aforesaid, do hereby certify that Patrick J. Phillips, personally known to me to be the same person whose name is subscribed to the foregoing instrument, appeared before me this day in person and acknowledged that (s)he signed, sealed and delivered the said instrument as his/her free and voluntary act for the uses and purposes therein set forth.

IN WITNESS WHEREOF, I have hereunto set my hand and Notarial Seal, this
5TH day of SEPTEMBER, 2000.



(SEAL)

Bonnie F. Belisle
Notary Public

My Commission Expires: Nov. 8, 2000

TRANSMITTAL LETTER			Case No. 5050-773
Serial No. 09/657,635	Filing Date September 6, 2000	Examiner unassigned	Group Art Unit unassigned
Inventor(s) Ismayil M. Guracar et al.			
Title of Invention CONTRAST IMAGING BEAM SEQUENCES FOR MEDICAL DIAGNOSTIC ULTRASOUND			

TO THE COMMISSIONER FOR PATENTS

Transmitted herewith is Transmittal (in duplicate); Information Disclosure Statement; PTO-1449; References cited; Postcard.

- ☐ Small entity status of this application under 37 CFR § 1.27 has been established by verified statement previously submitted.
- ☐ A verified statement to establish small entity status under 37 CFR §§ 1.9 and 1.27 is enclosed.
- ☐ Petition for a _____ month extension of time.
- ☒ No additional fee is required.
- ☐ The fee has been calculated as shown below:

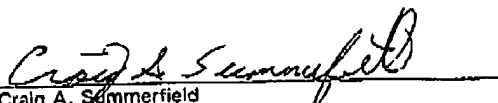
	Claims Remaining After Amendment		Highest No. Previously Paid For	Present Extra
Total		Minus		
Indep.		Minus		
First Presentation of Multiple Dep. Claim				

Small Entity	
Rate	Add'l Fee
x \$9 =	
x 40 =	
+ \$135 =	
Total add'l fee	\$

Other Than Small Entity	
Rate	Add'l Fee
x \$18 =	
x \$80 =	
+ \$270 =	
Total add'l fee	\$

- ☐ Please charge Deposit Account No. 23-1925 (BRINKS HOFER GILSON & LIONE) in the amount of \$_____. A duplicate copy of this sheet is enclosed.
- ☐ A check in the amount of \$_____ to cover the filing fee is enclosed.
- ☒ The Commissioner is hereby authorized to charge payment of any additional filing fees required under 37 CFR § 1.16 and any patent application processing fees under 37 CFR § 1.17 associated with this communication or credit any overpayment to Deposit Account No. 23-1925. A duplicate copy of this sheet is enclosed.
- ☒ I hereby petition under 37 CFR § 1.136(a) for any extension of time required to ensure that this paper is timely filed. Please charge any associated fees which have not otherwise been paid to Deposit Account No. 23-1925. A duplicate copy of this sheet is enclosed.

Respectfully submitted,


 Craig A. Summerfield
 Registration No. 37,847
 Attorney for Applicant

BRINKS HOFER GILSON & LIONE
 P.O. BOX 10395
 CHICAGO, ILLINOIS 60610
 (312) 321-4200

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail, with sufficient postage, in an envelope addressed to: Commissioner for Patents, Washington, D.C. 20231, on November 7, 2000.

Date: 11/7/00

Signature: 

rev. Oct.-00
 Document 3

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail, with sufficient postage, in an envelope addressed to: the Assistant Commissioner for Patents, Washington, D.C. 20231 on November 7, 2000

Craig A. Summerfield, Reg. No. 37,947

Name of Applicant, assignee or Registered Representative

Craig A. Summerfield
Signature of above

November 7, 2000
Date of Signature

PATENT
Our Case No. 5050/773

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Ismayil M. Guracar et al.

Serial No. Divisional of 09/657,635

Filing Date: September 6, 2000

For **CONTRAST IMAGING BEAM
SEQUENCES FOR MEDICAL
DIAGNOSTIC ULTRASOUND**

Examiner: (unassigned)

Group Art Unit No. (unassigned)

INFORMATION DISCLOSURE STATEMENT

Honorable Assistant Commissioner
for Patents
Washington, D.C. 20231

Sir:

Applicants have enclosed a form PTO-1449 and copies of the cited references.

Applicants request that the references listed in the form PTO-1449 be reviewed and made of record.

Applicants also wish to bring to the Examiner's attention the following pending United States Patent applications:

In re application of: Gurac̃ar et al.
Divisional of 09/657,635

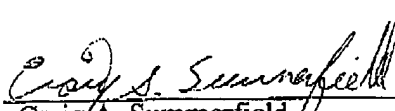
U.S. Patent Application, Serial No. 09/514,803
(Attorney Docket No. 5050/712), filed February 29, 2000

U.S. Patent Application, Serial No. 09/348,246
(Attorney Docket No. 5050/667), filed July 2, 1999

Applicants believe that these applications either alone or in combination with the references cited in the PTO-1449 neither disclose nor suggest Applicants' claimed invention. Applicants, however, respectfully requests that the Examiner review the entire disclosure of these applications and place an indication in the file that they have been reviewed (MPEP § 609 D). Applicants additionally request that citation to these patent applications not be printed on the patent (MPEP § 609 D). Pursuant to 37 C.F.R. § 1.98(a)(2)(iii), copies of these applications are not included. If the Examiner would like Applicants to provide copies, please call the undersigned at (312) 321-4726. Copies of the other references are enclosed.

Respectfully submitted,

Date: November 7, 2000



Craig A. Summerfield
Registration No. 37,947
Attorney for Applicant

BRINKS HOFER GILSON & LIONE
P.O. Box 10395
Chicago, Illinois 60610
Telephone: (312) 321-4200
Facsimile: (312) 321-4299

FORM PTO-1449 LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT (use several sheets if necessary)	SERIAL NO.	CASE NO.
	09/657,635	5050-773
	FILING DATE September 6, 2000	GROUP ART UNIT unassigned
APPLICANT(S): Ismayil M. Guracar et al.		

REFERENCE DESIGNATION U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS/ SUBCLASS	FILING DATE
	A1	5,632,277	05/27/97	Champman et al.		
	A2	5,675,554	10/07/97	Cole et al.		
	A3	5,951,478	09/14/99	Hwang et al.		
	A4	6,095,980	08/01/00	Burns et al.		
	A5					
	A6					
	A7					
	A8					
	A9					
	A10					
	A11					
	A12					
	A13					

FOREIGN PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	COUNTRY	CLASS/ SUBCLASS	TRANSLATION YES NO
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EXAMINER INITIAL	OTHER ART (Including Author, Title, Date, Pertinent Pages, etc.)					
	A14	Johan Kirkhorn et al., Improved Ultrasound Contrast Detection Combining Harmonic Power Doppler with a Release-Burst; 1999 IEEE Ultrasonics Symposium; pp. 1697-1700;				
	A15					
	A16					

EXAMINER	DATE CONSIDERED
-----------------	------------------------

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Rev. Oct. 97

F:\COMMON\CAS\5050 ACUSON\IDS\5050-773 Form PTO 1449.doc



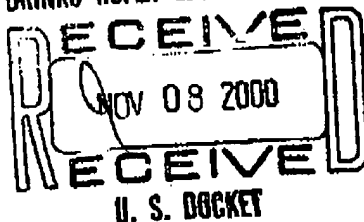
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UNITED STATES PATENT AND TRADEMARK OFFICE
WASHINGTON, D.C. 20231
www.uspto.gov

APPLICATION NUMBER	FILING DATE	GRP ART UNIT	FIL FEE REC'D	ATTY. DOCKET NO.	DRAWINGS	TOT CLAIMS	IND CLAIMS
09/657,635	09/06/2000	2631	1248	5050-773	5	38	6

Craig A Summerfield
Brinks Hofer Gilson & Lione
P O Box 10395
Chicago, IL 60610

BRINKS HOFER GILSON & LIONE



FILING RECEIPT



0000000005518265

Date Mailed: 10/31/2000

Receipt is acknowledged of this nonprovisional Patent Application. It will be considered in its order and you will be notified as to the results of the examination. Be sure to provide the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION when inquiring about this application. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please write to the Office of Initial Patent Examination's Customer Service Center. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the PTO processes the reply to the Notice, the PTO will generate another Filing Receipt incorporating the requested corrections (if appropriate).

Applicant(s)

Ismayil M. Guracar, Redwood City, CA ;
Patrick J. Phillips, Sunnyvale, CA ;

Continuing Data as Claimed by Applicant

Foreign Applications

If Required, Foreign Filing License Granted 10/23/2000

Title

Contrast imaging beam sequences for medical diagnostic ultrasound

Preliminary Class

375

Data entry by : KANNO, MESERET

Team : OIPE

Date: 10/31/2000



**LICENSE FOR FOREIGN FILING UNDER
Title 35, United States Code, Section 184
Title 37, Code of Federal Regulations, 5.11 & 5.15**

GRANTED

The applicant has been granted a license under 35 U.S.C. 184, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" followed by a date appears on this form. Such licenses are issued in all applications where the conditions for issuance of a license have been met, regardless of whether or not a license may be required as set forth in 37 CFR 5.15. The scope and limitations of this license are set forth in 37 CFR 5.15(a) unless an earlier license has been issued under 37 CFR 5.15(b). The license is subject to revocation upon written notification. The date indicated is the effective date of the license, unless an earlier license of similar scope has been granted under 37 CFR 5.13 or 5.14.

This license is to be retained by the licensee and may be used at any time on or after the effective date thereof unless it is revoked. This license is automatically transferred to any related applications(s) filed under 36 CFR 1.53(d). This license is not retroactive.

The grant of a license does not in any way lessen the responsibility of a licensee for the security of the subject matter as imposed by any Government contract or the provisions of existing laws relating to espionage and the national security or the export of technical data. Licensees should apprise themselves of current regulations especially with respect to certain countries, of other agencies, particularly the Office of Defense Trade Controls, Department of State (with respect to Arms, Munitions and Implements of War (22 CFR 121-128)); the Office of Export Administration, Department of Commerce (15 CFR 370.10 (j)); the Office of Foreign Assets Control, Department of Treasury (31 CFR Parts 500+) and the Department of Energy.

NOT GRANTED

No license under 35 U.S.C. 184 has been granted at this time, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" DOES NOT appear on this form. Applicant may still petition for a license under 37 CFR 5.12, if a license is desired before the expiration of 6 months from the filing date of the application. If 6 months has lapsed from the filing date of this application and the licensee has not received any indication of a secrecy order under 35 U.S.C. 181, the licensee may foreign file the application pursuant to 37 CFR 5.15 (b).

PLEASE NOTE the following information about the Filing Receipt:

- The articles such as "a," "an" and "the" are not included as the first words in the title of an application. They are considered to be unnecessary to the understanding of the title.
- The words "new," "improved," "improvements in" or "relating to" are not included as first words in the title of an application because a patent application, by nature, is a new idea or improvement.
- The title may be truncated if it consists of more than 600 characters (letters and spaces combined).
- The docket number allows a maximum of 25 characters.
- If your application was submitted under 37 CFR 1.10, your filing date should be the "date in" found on the Express Mail label. If there is a discrepancy, you should submit a request for a corrected Filing Receipt along with a copy of the Express Mail label showing the "date in."
- The title is recorded in sentence case.

Any corrections that may need to be done to your Filing Receipt should be directed to:

Assistant Commissioner for Patents
Office of Initial Patent Examination
Customer Service Center
Washington, DC 20231

Office Action Summary	Application No. 09/657,635	Applicant(s) GURACAR ET AL.	
	Examiner Jaworski Francis J.	Art Unit 3737	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 November 2000.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

Application/Control Number: 09/657,635

Page 2

Art Unit: 3737

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. Claims 1-10 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Applicants are claiming a sequence. The Examiner is interpreting this as the claiming of a format, neither structure nor the method of implementing the format, nor a software-resident on computer-readable medium for effecting a format, but rather the abstraction of a format in and of itself.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 11 - 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Clark (US5980458) in view of Poland (US6080107)..

The former is directed to interleaved collateral transmissions as per col. 2 line 3 - col. 4 line 5 and/or as supplemented col. 4 line 9 - col. 6 line 8. It would have been obvious in view of the

Application/Control Number: 09/657,635

Page 3

Art Unit: 3737

latter to use the system of the Clark face figure in association with contrast agent imaging (Fig. 1 and col. 11 lines 36-43 and col. 11 lines 55-58 of Poland considered against Clark face figure and aforementioned interleaving teachings.

5. Claims 11-33 are further rejected under 35 U.S.C. 103(a) as being unpatentable over the combined teachings of Hwang (US6193662) and Averkiou et al (US6186950). The former is directed to high frame rate contrast agent imaging wherein the distinction between the terms 'interleaved' and 'collateral pulses' in relation to scanlines is blurred because both the echo scanlines and intermediates composited from re-sampling and/or interpolation are also referred to as scanlines such that pulses may all serve a collateral function in compositing intermediate scanlines. Additionally, Averkiou et al col. 6 line 52 - col. 7 line - 32 is apparently further suggesting that for purposes of perfusion or low velocity flow measurement, high frame rate techniques may be combined with time interleaving and/or additional three-pulse phase inversion processing to diminish motion artifact.

6. Claims 34-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Averkiou et al (US6186950) or Hwang et al (US6228031) insofar as the former teaches a method including identifying first signals associated with artifact (col. 3 lines 1-48) with the Examiner arguing that it

Application/Control Number: 09/657,635

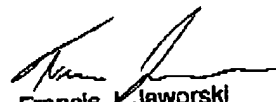
Page 4

Art Unit: 3737

would be inherently obvious for the practitioner to observe same and declare that a motion artifact condition is present, and therefore switching to a mode in which phase inversion is extended to further pulses which replace the simple phase inversion imaging and are a function of these further pulses responsive to the contrast agent, and the latter teaches that upon identification of 'picket fence' artifact due to motion (col. 4 lines 41-44) a filtering substitution can be implemented per col. 4 line 45 - col. 5 line 47..

7. The following art is cited as of interest.. Krishnan et al (US6340348) is cited for its col. 1-2 discussion of LOC imaging. Chiao et al (US6210332) is cited for its col. 9 line 5 - col. 10 line 56 low-flow scanning formats.

8. Any inquiry concerning this communication should be directed to Examiner Francis J. Jaworski at telephone number (703) 308-3061.


Francis J. Jaworski
Primary Examiner

FJJ:fjj

4-12-02



FORM PTO-1449 LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT (use several sheets if necessary)	SERIAL NO.	CASE NO.
	09/657,635	5050-773
	FILING DATE September 6, 2000	GROUP ART UNIT unassigned
APPLICANT(S): Ismayil M. Guracar et al.		

REFERENCE DESIGNATION

U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS/ SUBCLASS	FILING DATE
<i>[initials]</i>	A1	5,632,277	05/27/97	Chapman et al. <i>Chapman et al.</i>		
	A2	5,675,554	10/07/97	Cole et al.		
<i>[initials]</i>	A3	5,951,478	09/14/99	Hwang et al.		
	A4	6,095,980	08/01/00	Burns et al.		
	A5					
	A6					
	A7					
	A8					
	A9					
	A10					
	A11					
	A12					
	A13					

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NOV 16 2000

Technology Center 2000

FOREIGN PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	COUNTRY	CLASS/ SUBCLASS	TRANSLATION YES NO
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EXAMINER INITIAL		OTHER ART (Including Author, Title, Date, Pertinent Pages, etc.)
<i>[initials]</i>	A14	Johan Kirkhorn et al., Improved Ultrasound Contrast Detection Combining Harmonic Power Doppler with a Release-Burst; 1999 IEEE Ultrasonics Symposium; pp. 1697-1700;
	A15	
	A16	

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EXAMINER <i>[signature]</i>	DATE CONSIDERED 4-12-02
-----------------------------	----------------------------

EXAMINER: initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Rev. Oct. 97

F:\COMMON\CAS\5050 ACUSON\IDS\5050-773 Form PTO 1449.doc

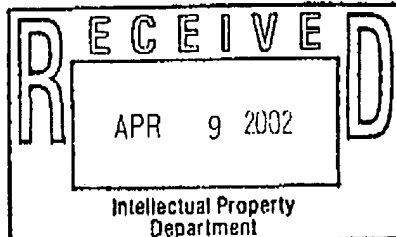


UNITED STATES PATENT AND TRADEMARK OFFICE

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UNITED STATES PATENT AND TRADEMARK OFFICE
WASHINGTON, D.C. 20231
www.uspto.gov

APPLICATION NUMBER	FILING DATE	GRP ART UNIT	FIL FEE REC'D	ATTY. DOCKET NO	DRAWINGS	TOT CLAIMS	IND CLAIMS
09/657,635	09/06/2000	3737	1248	2000P82261 US	5	38	6

454
Elsa Keller
SIEMENS CORPORATION
Intellectual Property Department
186 Wood Avenue South
Iselin, NJ 08830



CONFIRMATION NO. 1723

CORRECTED FILING RECEIPT



OC000000007785221

Date Mailed: 04/03/2002

DATA
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Receipt is acknowledged of this nonprovisional Patent Application. It will be considered in its order and you will be notified as to the results of the examination. Be sure to provide the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION when inquiring about this application. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please write to the Office of Initial Patent Examination's Customer Service Center. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections (if appropriate).

Applicant(s)

Ismayil M. Guracar, Redwood City, CA;
Patrick J. Phillips, Sunnyvale, CA;

Domestic Priority data as claimed by applicant

Foreign Applications

If Required, Foreign Filing License Granted 10/23/2000

Projected Publication Date: Not Applicable, filed prior to November 29, 2000

Non-Publication Request: No

Early Publication Request: No

Title

Contrast imaging beam sequences for medical diagnostic ultrasound

Preliminary Class

600

APR 18 2002
TELECOMMUNICATIONS
DIVISION

**LICENSE FOR FOREIGN FILING UNDER
Title 35, United States Code, Section 184
Title 37, Code of Federal Regulations, 5.11 & 5.15**

GRANTED

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The grant of a license does not in any way lessen the responsibility of a licensee for the security of the subject matter as imposed by any Government contract or the provisions of existing laws relating to espionage and the national security or the export of technical data. Licensees should apprise themselves of current regulations especially with respect to certain countries, of other agencies, particularly the Office of Defense Trade Controls, Department of State (with respect to Arms, Munitions and Implements of War (22 CFR 121-128)); the Office of Export Administration, Department of Commerce (15 CFR 370.10 (j)); the Office of Foreign Assets Control, Department of Treasury (31 CFR Parts 500+) and the Department of Energy.

NOT GRANTED

No license under 35 U.S.C. 184 has been granted at this time, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" DOES NOT appear on this form. Applicant may still petition for a license under 37 CFR 5.12, if a license is desired before the expiration of 6 months from the filing date of the application. If 6 months has lapsed from the filing date of this application and the licensee has not received any indication of a secrecy order under 35 U.S.C. 181, the licensee may foreign file the application pursuant to 37 CFR 5.15(b).

TRANSMITTAL LETTER			Case No. 2000P82261 US
Serial No. 09/657,835	Filing Date September 8, 2000	Examiner	Group Art Unit 2631
Inventor(s) Ismayil M. Guracar et al.			
Title of Invention CONTRAST IMAGING BEAM SEQUENCES FOR MEDICAL DIAGNOSTIC ULTRASOUND			

TO THE COMMISSIONER FOR PATENTS

Transmitted herewith is Request For Corrected Filing Receipt; copy of Filing Receipt; Associate Power of Attorney and Change of Correspondence Address and return post card.

- ☐ Small entity status of this application under 37 CFR § 1.27 has been established by verified statement previously submitted.
- ☐ A verified statement to establish small entity status under 37 CFR §§ 1.9 and 1.27 is enclosed.
- ☐ Petition for a _____ month extension of time.
- ☒ No additional fee is required.
- ☐ The fee has been calculated as shown below:

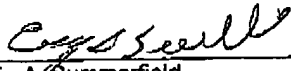
	Claims Remaining After Amendment		Highest No. Previously Paid For	Present Extra
Total		Minus		
Indep.		Minus		
First Presentation of Multiple Dep. Claim				

Small Entity	
Rate	Add'l Fee
x \$9=	
x 42=	
+\$140=	
Total add'l fee	\$

Other Than Small Entity	
Rate	Add'l Fee
x \$18=	
x \$84=	
+\$280=	
Total add'l fee	\$

- ☐ Please charge Deposit Account No. 23-1925 (BRINKS HOFER GILSON & LIONE) in the amount of \$_____. A duplicate copy of this sheet is enclosed.
- ☐ A check in the amount of \$_____ to cover the filing fee is enclosed.
- ☒ The Commissioner is hereby authorized to charge payment of any additional filing fees required under 37 CFR § 1.16 and any patent application processing fees under 37 CFR § 1.17 associated with this communication or credit any overpayment to Deposit Account No. 23-1925. A duplicate copy of this sheet is enclosed.
- ☒ I hereby petition under 37 CFR § 1.136(a) for any extension of time required to ensure that this paper is timely filed. Please charge any associated fees which have not otherwise been paid to Deposit Account No. 23-1925. A duplicate copy of this sheet is enclosed.

Respectfully submitted,


 Craig A. Summerfield
 Registration No. 37,947
 Attorney for Applicant(s)

BRINKS HOFER GILSON & LIONE
 P.O. BOX 10395
 CHICAGO, ILLINOIS 60610 - (312) 321-4200

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail, with sufficient postage, in an envelope addressed to: Commissioner for Patents, Washington, D.C. 20231, on February 13, 2002.

Date: 2/17/02

Signature: 

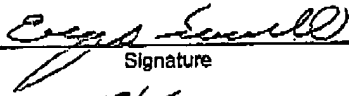
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February 13, 2002

Date of Deposit

Craig A. Summerfield, Reg. No. 37,947

Name of applicant, assignee or
Registered Representative



Signature

2/13/02

Date of Signature

Attorney Docket No.: 2000P82261 US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Ismayil M. Guracar et al.

Serial No.: 09/657,635

Group Art Unit No.: 2631

Filing Date: September 6, 2000

For: CONTRAST IMAGING BEAM SEQUENCES
FOR MEDICAL DIAGNOSTIC
ULTRASOUND

REQUEST FOR CORRECTION OF FILING RECEIPT

Commissioner for Patents
Washington, D.C. 20231

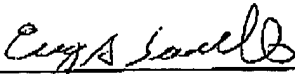
Attention: Application Processing Division
Customer Correction Branch

Sir:

Applicants request the issuance of a corrected filing receipt (copy enclosed) for the above-referenced patent application, and in support of this request respectfully requests that the Attorney Docket Number be changed from 5050/773 to:
2000P82261 US.

The Commissioner is hereby authorized to charge any fees required to Deposit
Account No. 23-1925.

Respectfully submitted,



Craig A. Summerfield
Registration No. 37,947
Attorney for Applicant(s)

BRINKS HOFER GILSON & LIONE
P.O. BOX 10395
CHICAGO, ILLINOIS 60610
Tel. (312) 321-4200

Attorney Docket No. 2000P82261 USInventor(s): Ismayil M. Guracar et al.Title: CONTRAST IMAGING BEAM SEQUENCES FOR MEDICAL DIAGNOSTIC ULTRASOUND**ASSOCIATE POWER OF ATTORNEY and
CHANGE OF CORRESPONDENCE ADDRESS**

The specification of the above-identified patent application:



is attached hereto

was filed on September 6, 2000 as application Serial No. 09/657,635

As one of the attorneys of record for the above-identified patent application I hereby appoint the following attorneys to prosecute said patent application and to transact all business in the Patent and Trademark Office connected therewith:

Adel A. Ahmed, Reg. No. 29,606; I. Marc Asperas, Reg. No. 37,274; Stanton C. Braden, Reg. No. 32,556; Alexander J. Burke, Reg. No. 40,425; David D. Chung, Reg. No. 38,409; Joseph S. Codispoti, Reg. No. 31,819; Henry J. Groth, Reg. No. 39,696; Mark H. Jay, Reg. No. 27,507; Brian K. Johnson, Reg. No. 46,808; Stuart P. Kaler, Reg. No. 35,913; Rosa S. Kim, Reg. No. 39,728; Jenny G. Ko, Reg. No. 44,190; Peter A. Luccarelli Jr., Reg. No. 29,750; James M. Markarian, Reg. No. 31,277; Jeffrey P. Morris, Reg. No. 25,307; Pasquale Musacchio, Reg. No. 36,876; John Musone, Reg. No. 44,961; Frank J. Nuzzi, Reg. No. 42,944; Donald B. Paschburg, Reg. No. 33,753; Laura M. Slenzak, Reg. No. 35,363; Daniel J. Staudt, Reg. No. 34,733; Erik C. Swanson, Reg. No. 40,194; Heather S. Vance, Reg. No. 39,033; Michael J. Wallace, Reg. No. 44,486;

Please change the correspondence address for the above-identified patent application and replace it with:

Elsa Keller
SIEMENS CORPORATION
Intellectual Property Department
186 Wood Avenue South
Iselin, New, Jersey 08830
Telephone: (732) 321-3026

The undersigned attorney for Applicants hereby authorizes the U.S. attorneys named herein and on the original Power of Attorney to make decisions and take any action in the Patent and Trademark Office regarding this application without direct communication between the U.S. attorney and the undersigned. In the event of a change in the persons from whom instructions may be taken, the U.S. attorneys named herein will be so notified by the undersigned.

The undersigned attorney for Applicants is empowered to act on behalf of the assignee(s).

I hereby declare that all statements made herein of my own knowledge are true, and that all statements made on information and belief are believed to be true; and further, that these statements are made with the knowledge that willful false statements, and the like so made, are punishable by fine or imprisonment, or both, under Section 1001, Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Signature

Name:

Title:

Craig A. Summerfield
Craig A. Summerfield, Reg. No. 37,947
Attorney for Applicants

Date:

2/17/02



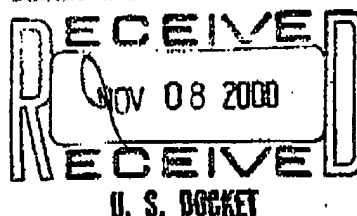
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UNITED STATES PATENT AND TRADEMARK OFFICE
WASHINGTON, D.C. 20231
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APPLICATION NUMBER	FILING DATE	GRP ART UNIT	FIL FEE REC'D	ATTY. DOCKET NO	DRAWINGS	TOT CLAIMS	IND CLAIMS
09/657,635	09/06/2000	2631	1248	5050-773	5	38	6

Craig A Summerfield
Brinks Hofer Gilson & Lione
P O Box 10395
Chicago, IL 60610

BRINKS HOFER GILSON & LIONE



FILING RECEIPT



0000000005518265

Date Mailed: 10/31/2000

Receipt is acknowledged of this nonprovisional Patent Application. It will be considered in its order and you will be notified as to the results of the examination. Be sure to provide the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION when inquiring about this application. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please write to the Office of Initial Patent Examination's Customer Service Center. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the PTO processes the reply to the Notice, the PTO will generate another Filing Receipt incorporating the requested corrections (if appropriate).

Applicant(s)

Ismayil M. Guracar, Redwood City, CA ;
Patrick J. Phillips, Sunnyvale, CA ;

Continuing Data as Claimed by Applicant

Foreign Applications

If Required, Foreign Filing License Granted 10/23/2000

Title

Contrast imaging beam sequences for medical diagnostic ultrasound

Preliminary Class

375

Data entry by : KANNO, MESERET

Team : OIPE

Date: 10/31/2000



**LICENSE FOR FOREIGN FILING UNDER
Title 35, United States Code, Section 184
Title 37, Code of Federal Regulations, 5.11 & 5.15**

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The grant of a license does not in any way lessen the responsibility of a licensee for the security of the subject matter as imposed by any Government contract or the provisions of existing laws relating to espionage and the national security or the export of technical data. Licensees should apprise themselves of current regulations especially with respect to certain countries, of other agencies, particularly the Office of Defense Trade Controls, Department of State (with respect to Arms, Munitions and Implements of War (22 CFR 121-128)); the Office of Export Administration, Department of Commerce (15 CFR 370.10 (j)); the Office of Foreign Assets Control, Department of Treasury (31 CFR Parts 500+) and the Department of Energy.

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PLEASE NOTE the following information about the Filing Receipt:

- The articles such as "a," "an" and "the" are not included as the first words in the title of an application. They are considered to be unnecessary to the understanding of the title.
- The words "new," "improved," "improvements in" or "relating to" are not included as first words in the title of an application because a patent application, by nature, is a new idea or improvement.
- The title may be truncated if it consists of more than 600 characters (letters and spaces combined).
- The docket number allows a maximum of 25 characters.
- If your application was submitted under 37 CFR 1.10, your filing date should be the "date in" found on the Express Mail label. If there is a discrepancy, you should submit a request for a corrected Filing Receipt along with a copy of the Express Mail label showing the "date in."
- The title is recorded in sentence case.

Any corrections that may need to be done to your Filing Receipt should be directed to:

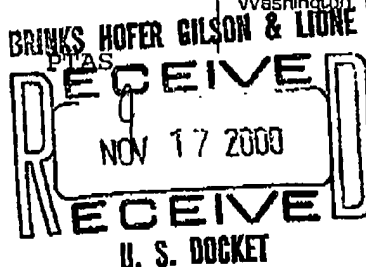
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Washington, DC 20231



UNITED STATES DEPARTMENT OF COMMERCE
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Washington, D.C. 20231

NOVEMBER 08, 2000

BRINKS HOFER GILSON & LIONE
CRAIG A. SUMMERFIELD
P.O. BOX 10395
CHICAGO, IL 60610



101467649A

UNITED STATES PATENT AND TRADEMARK OFFICE
NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT

THE ENCLOSED DOCUMENT HAS BEEN RECORDED BY THE ASSIGNMENT DIVISION OF THE U.S. PATENT AND TRADEMARK OFFICE. A COMPLETE MICROFILM COPY IS AVAILABLE AT THE ASSIGNMENT SEARCH ROOM ON THE REEL AND FRAME NUMBER REFERENCED BELOW.

PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY CONTACT THE EMPLOYEE WHOSE NAME APPEARS ON THIS NOTICE AT 703-308-9723. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, ASSIGNMENT DIVISION, BOX ASSIGNMENTS, CG-4, 1213 JEFFERSON DAVIS HWY, SUITE 320, WASHINGTON, D.C. 20231.

RECORDATION DATE: 09/06/2000

REEL/FRAME: 011085/0981
NUMBER OF PAGES: 4

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:
GURACAR, ISMAYIL M.

DOC DATE: 09/05/2000

ASSIGNOR:
PHILLIPS, PATRICK J.

DOC DATE: 09/05/2000


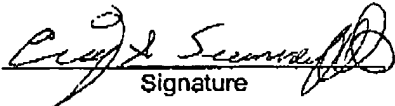
ASSIGNEE:
ACUSON CORPORATION
1220 CHARLESTON ROAD
MAIL STOP E-1
MOUNTAIN VIEW, CALIFORNIA 94043

SERIAL NUMBER: 09657635
PATENT NUMBER:

FILING DATE: 09/06/2000
ISSUE DATE:

011085/0981 PAGE 2

STEVEN POST, EXAMINER
ASSIGNMENT DIVISION
OFFICE OF PUBLIC RECORDS

PATENTS ONLY TO THE DIRECTOR OF THE		PATENTS ONLY AND TRADEMARK OFFICE	
Please record 101467649 py thereof.			
1. Name of Party(ies) conveying an interest: <div style="text-align: right; margin-right: 50px;"> 9-6-00 </div> Ismayil M. Guracar Patrick J. Phillips Additional name(s) of conveying party(ies) attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	2. Name and Address of Party(ies) receiving an interest: Name: Acuson Corporation Internal Address: Mail Stop E-1 Street Address: 1220 Charleston Road City: Mountain View State/Zip: CA/94043 Additional name(s) and addresses attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
3. Description of the interest conveyed: <input checked="" type="checkbox"/> Assignment <input type="checkbox"/> Change of Name Other: <input type="checkbox"/> Security Agreement <input type="checkbox"/> Merger Execution Date: <u>09/05/00</u>			
4. Application number(s) or patent number(s). Additional sheet attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If this document is being filed together with a new application, the execution date of the application is: <u>September 5, 2000</u> Date A. Patent Application No.(s) B. Patent No.(s) <div style="text-align: right; margin-right: 50px;"> 09/657635 </div> Additional numbers attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
5. Name and address of party to whom correspondence concerning document should be mailed: BRINKS HOFER GILSON & LIONE P.O. BOX 10395 CHICAGO, IL 60610 (312)321-4200	6. Number of applications and patents involved: <u>1</u> 7. Total fee (37 CFR 3.41) \$ 40.00 <input checked="" type="checkbox"/> Enclosed <input type="checkbox"/> Authorized to be charged to Deposit Account No. 23-1925 8. <input checked="" type="checkbox"/> Please charge any deficiencies in fee or credit any overpayment to Deposit Account No. 23-1925.		
DO NOT USE THIS SPACE			
<div style="display: flex; justify-content: space-between;"> <div> 09/25/2000 JJALLAH2 00000214 09657635 01 FC:581 </div> <div style="border: 1px solid black; border-radius: 50%; width: 100px; height: 100px; text-align: center; line-height: 100px;"> 40.00 8P </div> </div>			
9. Statement and signature. To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document. <div style="display: flex; justify-content: space-between;"> <div> <u>Craig A. Summerfield</u> Name of Person Signing </div> <div style="text-align: center;">  Signature </div> <div> <u>September 6, 2000</u> Date </div> </div>			
Total number of pages including cover sheet, attachments, and document: <u>4</u>			

Rev. Dec.-99

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Case No. 5050-773

ASSIGNMENT

WHEREAS, Ismayil M. Guracar and Patrick J. Phillips, hereinafter called the "Assignors", have made the invention described in the United States patent application entitled CONTRAST IMAGING BEAM SEQUENCES FOR MEDICAL DIAGNOSTIC ULTRASOUND, executed by Assignors on the same date as this Assignment;

WHEREAS, Acuson Corporation, a corporation organized and existing under the laws of the State of Delaware, having a place of business at 1220 Charleston Road, Mountain View, CA 94043, hereinafter called the "Assignee", desires to acquire the entire right, title and interest in and to the invention and the patent application identified above, and all patents which may be obtained for said invention, as set forth below;

NOW, THEREFORE, in consideration of the sum of One Dollar (\$1.00), and other valuable and legally sufficient consideration, the receipt of which by the Assignors from the Assignee is hereby acknowledged, the Assignors have sold, assigned and transferred, and by these presents do sell, assign and transfer to the Assignee, the entire right, title and interest for the United States in and to the invention and the patent application identified above, and any patents that may issue for said invention in the United States; together with the entire right, title and interest in and to said invention and all patent applications and patents therefor in all countries foreign to the United States, including the full right to claim for any such application all benefits and priority rights under any applicable convention; together with the entire right, title and interest in and to all continuations, divisions, renewals and extensions of any of the patent applications and patents defined above; to have and to hold for the sole and exclusive use and benefit of the Assignee, its successors and assigns, to the full end of the term or terms for all such patents.

The Assignors hereby covenant and agree, for both the Assignors and the Assignors' legal representatives, that the Assignors will assist the Assignee in the prosecution of the patent application identified above; in the making and prosecution of any other patent applications that the Assignee may elect to make covering the invention identified above; in vesting in the Assignee like exclusive title in and to all such other patent applications and patents; and in the prosecution of any interference which may arise involving said invention, or

any such patent application or patent; and that the Assignors will execute and deliver to the Assignee any and all additional papers which may be requested by the Assignee to carry out the terms of this Assignment.

The Commissioner of Patents and Trademarks is hereby authorized and requested to issue patents to the Assignee in accordance with the terms of this Assignment.

IN TESTIMONY WHEREOF, the Assignors have executed this agreement.

DATED:

Sept 5, 2000

Ismayil M. Guracar
Ismayil M. Guracar

DATED:

Sept 5, 2000

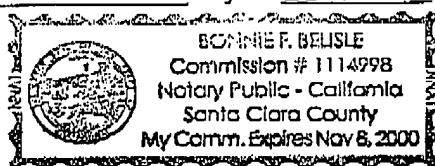
Patrick J. Phillips
Patrick J. Phillips

STATE OF CALIFORNIA)
) ss.
COUNTY OF SANTA CLARA)

I, BONNIE F. BELISLE, A Notary Public in and for the County and State aforesaid, do hereby certify that Ismayil M. Guracar, personally known to me to be the same person whose name is subscribed to the foregoing instrument, appeared before me this day in person and acknowledged that (s)he signed, sealed and delivered the said instrument as his/her free and voluntary act for the uses and purposes therein set forth.

IN WITNESS WHEREOF, I have hereunto set my hand and Notarial Seal, this 5TH day of SEPTEMBER, 2000.

(SEAL)



Bonnie F. Belisle
Notary Public

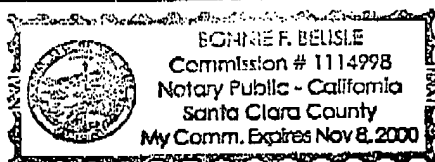
My Commission Expires: Nov. 8, 2000

STATE OF CALIFORNIA)
) ss.
COUNTY OF SANTA CLARA)

I, BONNIE F. BELISLE, A Notary Public in and for the County and State aforesaid, do hereby certify that Patrick J. Phillips, personally known to me to be the same person whose name is subscribed to the foregoing instrument, appeared before me this day in person and acknowledged that (s)he signed, sealed and delivered the said instrument as his/her free and voluntary act for the uses and purposes therein set forth.

IN WITNESS WHEREOF, I have hereunto set my hand and Notarial Seal, this 5TH day of SEPTEMBER, 2000.

(SEAL)



Bonnie F. Belisle
Notary Public

My Commission Expires: Nov. 8, 2000

TRANSMITTAL LETTER			Case No. 6050-773
Serial No. 09/667,635	Filing Date September 6, 2000	Examiner unassigned	Group Art Unit unassigned
Inventor(s) Ismayil M. Guracar et al.			
Title of Invention CONTRAST IMAGING BEAM SEQUENCES FOR MEDICAL DIAGNOSTIC ULTRASOUND			

TO THE COMMISSIONER FOR PATENTS

Transmitted herewith is Transmittal (in duplicate); Information Disclosure Statement; PTO-1449; References cited; Postcard.

- ☐ Small entity status of this application under 37 CFR § 1.27 has been established by verified statement previously submitted.
- ☐ A verified statement to establish small entity status under 37 CFR §§ 1.9 and 1.27 is enclosed.
- ☐ Petition for a _____ month extension of time.
- ☒ No additional fee is required.
- ☐ The fee has been calculated as shown below:

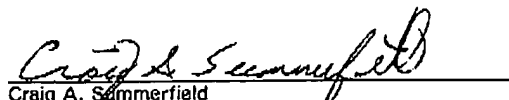
					Small Entity		Other Than Small Entity	
	Claims Remaining After Amendment		Highest No. Previously Paid For	Present Extra	Rate	Add'l Fee	Rate	Add'l Fee
Total		Minus			x \$9 =		x \$18 =	
Indep.		Minus			x 40 =		x \$80 =	
First Presentation of Multiple Dep. Claim					+ \$135 =		+ \$270 =	
					Total add'l fee	\$	Total add'l fee	\$

or

		Small Entity		Other Than Small Entity	
	Claims Remaining After Amendment		Highest No. Previously Paid For	Present Extra	Present Extra
Total		Minus			
Indep.		Minus			
First Presentation of Multiple Dep. Claim					

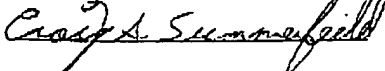
- ☐ Please charge Deposit Account No. 23-1925 (BRINKS HOFER GILSON & LIONE) in the amount of \$_____. A duplicate copy of this sheet is enclosed.
- ☐ A check in the amount of \$_____ to cover the filing fee is enclosed.
- ☒ The Commissioner is hereby authorized to charge payment of any additional filing fees required under 37 CFR § 1.16 and any patent application processing fees under 37 CFR § 1.17 associated with this communication or credit any overpayment to Deposit Account No. 23-1925. A duplicate copy of this sheet is enclosed.
- ☒ I hereby petition under 37 CFR § 1.136(a) for any extension of time required to ensure that this paper is timely filed. Please charge any associated fees which have not otherwise been paid to Deposit Account No. 23-1925. A duplicate copy of this sheet is enclosed.

Respectfully submitted,


 Craig A. Summerfield
 Registration No. 37,947
 Attorney for Applicant

BRINKS HOFER GILSON & LIONE
 P.O. BOX 10395
 CHICAGO, ILLINOIS 60610
 (312) 321-4200

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail, with sufficient postage, in an envelope addressed to: Commissioner for Patents, Washington, D.C. 20231, on November 7, 2000.

Date: 11/7/00 Signature: 

rev. Oct.-00
 Document 13

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail, with sufficient postage, in an envelope addressed to: the Assistant Commissioner for Patents, Washington, D.C. 20231 on November 7, 2000

Craig A. Summerfield, Reg. No. 37,947

Name of Applicant, assignee or Registered Representative

Craig A. Summerfield

Signature of above

November 7, 2000

Date of Signature

PATENT
Our Case No. 5050/773

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Ismayil M. Guracar et al.

Serial No. Divisional of 09/657,635

Examiner: (unassigned)

Filing Date: September 6, 2000

Group Art Unit No. (unassigned)

For **CONTRAST IMAGING BEAM
SEQUENCES FOR MEDICAL
DIAGNOSTIC ULTRASOUND**

INFORMATION DISCLOSURE STATEMENT

Honorable Assistant Commissioner
for Patents
Washington, D.C. 20231

Sir:

Applicants have enclosed a form PTO-1449 and copies of the cited references.

Applicants request that the references listed in the form PTO-1449 be reviewed and made of record.

Applicants also wish to bring to the Examiner's attention the following pending United States Patent applications:

*In re application of: Guracar et al.
Divisional of 09/657,635*

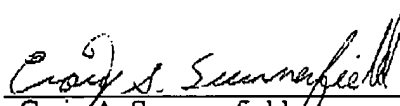
U.S. Patent Application, Serial No. 09/514,803
(Attorney Docket No. 5050/712), filed February 29, 2000

U.S. Patent Application, Serial No. 09/348,246
(Attorney Docket No. 5050/667), filed July 2, 1999

Applicants believe that these applications either alone or in combination with the references cited in the PTO-1449 neither disclose nor suggest Applicants' claimed invention. Applicants, however, respectfully requests that the Examiner review the entire disclosure of these applications and place an indication in the file that they have been reviewed (MPEP § 609 D). Applicants additionally request that citation to these patent applications not be printed on the patent (MPEP § 609 D). Pursuant to 37 C.F.R. § 1.98(a)(2)(iii), copies of these applications are not included. If the Examiner would like Applicants to provide copies, please call the undersigned at (312) 321-4726. Copies of the other references are enclosed.

Respectfully submitted,

Date: November 7, 2000



Craig A. Summerfield
Registration No. 37,947
Attorney for Applicant

BRINKS HOFER GILSON & LIONE
P.O. Box 10395
Chicago, Illinois 60610
Telephone: (312) 321-4200
Facsimile: (312) 321-4299

FORM PTO-1449 LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT (use several sheets if necessary)	SERIAL NO.	CASE NO.
	09/657,635	5050-773
	FILING DATE	GROUP ART UNIT
	September 6, 2000	unassigned
	APPLICANT(S): Ismayil M. Guracar et al.	

REFERENCE DESIGNATION U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS/ SUBCLASS	FILING DATE
	A1	5,632,277	05/27/97	Champan et al.		
	A2	5,675,554	10/07/97	Cole et al.		
	A3	5,951,478	09/14/99	Hwang et al.		
	A4	6,095,980	08/01/00	Burns et al.		
	A5					
	A6					
	A7					
	A8					
	A9					
	A10					
	A11					
	A12					
	A13					

FOREIGN PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	COUNTRY	CLASS/ SUBCLASS	TRANSLATION YES NO
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EXAMINER INITIAL	OTHER ART (Including Author, Title, Date, Pertinent Pages, etc.)					
	A14	Johan Kirkhorn et al., Improved Ultrasound Contrast Detection Combining Harmonic Power Doppler with a Release-Burst; 1999 IEEE Ultrasonics Symposium; pp. 1697-1700;				
	A15					
	A16					

EXAMINER	DATE CONSIDERED
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EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

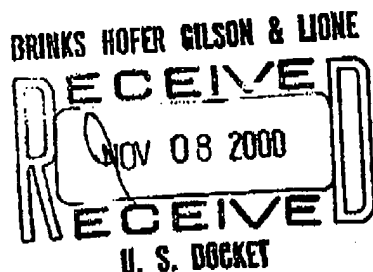


UNITED STATES PATENT AND TRADEMARK OFFICE

COMMISSIONER FOR PATENTS
UNITED STATES PATENT AND TRADEMARK OFFICE
WASHINGTON, D.C. 20231
www.uspto.gov

APPLICATION NUMBER	FILING DATE	GRP ART UNIT	FIL FEE REC'D	ATTY. DOCKET NO	DRAWINGS	TOT CLAIMS	IND CLAIMS
09/657,635	09/08/2000	2631	1248	5050-773	5	38	6

Craig A Summerfield
Brinks Hofer Gilson & Lione
P O Box 10395
Chicago, IL 60610



FILING RECEIPT



0C000000005518265

Date Mailed: 10/31/2000

Receipt is acknowledged of this nonprovisional Patent Application. It will be considered in its order and you will be notified as to the results of the examination. Be sure to provide the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION when inquiring about this application. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please write to the Office of Initial Patent Examination's Customer Service Center. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the PTO processes the reply to the Notice, the PTO will generate another Filing Receipt incorporating the requested corrections (if appropriate).

Applicant(s)

Ismayil M. Guracar, Redwood City, CA ;
Patrick J. Phillips, Sunnyvale, CA ;

Continuing Data as Claimed by Applicant

Foreign Applications

If Required, Foreign Filing License Granted 10/23/2000

Title

Contrast imaging beam sequences for medical diagnostic ultrasound

Preliminary Class

375

Data entry by : KANNO, MESERET

Team : OIPE

Date: 10/31/2000



Assistant Commissioner for Patents
Office of Initial Patent Examination
Customer Service Center
Washington, DC 20231